WHAT IS CLAIMED IS:

1.   A method for correcting a rotated iris image, the method comprising the steps of:

illuminating at least a portion of iris and pupil of a person's eye to detect an eye image;

5   (a) extracting an iris image from said detected eye image;

(b) detecting an inner and outer boundary of said iris image;

(c) converting said extracted iris image into polar coordinates;

(d) if said iris image is slanted, normalizing the corresponding said polar coordinates of said converted iris image so as to yield a predetermined dimension;

10   (e) comparing previously obtained iris identification information with said normalized polar coordinates obtained in step (d); and,

(f) determining whether there is a match in data compared in step (e) to authenticate said person.

15   2.   The method of claim 1, further comprising the steps of:

determining whether said iris image is rotated at an angle with respect to the centerline of said iris image;

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if yes, temporarily generating a plurality of arrays of said iris image with respect to

an array of said converted polar coordinates;

performing a wavelet transform to generate characteristic vectors corresponding to

the plurality of said arrays that are temporarily generated;

5   comparing said respective characteristic vectors generated with previously

registered characteristic vectors to obtain similarities; and,

accepting a new characteristic vector corresponding to the maximum similarity

among said obtained similarities as the correct characteristic vector of said person.

10   3.   The method of claim 1, wherein the outer boundary of said iris image is obtained

by comparing the pixel value representing said detected eye image with coordinates (x, y)

with the other pixel values surrounding the inner boundary of said iris image to determine

the maximum difference indicative of the outer boundary of said iris image.

15   4.   The method of claim 1, wherein a predetermined percentage of regions around said

iris image is converted into polar coordinates for said comparing step (e).

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5.	The method of claim 1, wherein an infrared light is used for illumination.

6.	The method of claim 1, wherein in a Canny edge detector is used for detecting the

inner boundary of said iris image.

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7.	A method for correcting a rotated iris image, the method comprising the steps of:

(a) capturing a plurality of iris images from a person's eye;

(b) detecting an inner and outer boundary of said iris images;

(c) converting the predetermined amount of said captured iris images into polar

10	coordinates;

(d) determining whether one of said iris images is slanted;

(e) if yes, temporarily generating a plurality of arrays of said iris image with

respect to an array of said converted polar coordinates;

(f) performing a wavelet transform to generate characteristic vectors corresponding

15	to the plurality of said arrays that are temporarily generated; and,

(g) comparing said respective characteristic vectors generated with previously

registered characteristic vectors to obtain similarities in order to authenticate said person.

8.   The method of claim 7, wherein said step (c) comprises the steps of:

normalizing the corresponding said polar coordinates of said converted iris images

so as to yield a predetermined dimension;

comparing previously obtained iris identification information with said normalized

5   polar coordinates obtained in said step (c);

determining whether there is a match in data compared in step (e); and,

accepting a new characteristic vector corresponding to the maximum similarity

among said obtained similarities as the correct characteristic vector of said person.

10   9.   The method of claim 7, wherein the outer boundary of said iris image is obtained

by comparing the pixel value representing said detected eye image with coordinates (x, y)

with the other pixel values surrounding the inner boundary of said iris image to determine

the maximum difference indicative of the outer boundary of said iris image.

15   10.   The method of claim 7, wherein in a Canny edge detector is used for detecting the

inner boundary of said iris image.

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